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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/357,262	07/20/1999	MASATOSHI SASE	450100-4995	8998

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EXAMINER

TRAN, NHAN T

ART UNIT	PAPER NUMBER
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2615

13

DATE MAILED: 05/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/357,262

Applicant(s)

SASE ET AL.

Examiner

Nhan T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2004 and 15 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-8 is/are rejected.
- 7) ☒ Claim(s) 3,9 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 12/15/2003 with respect to claims 1-10 have been considered but are moot in view of the new ground of rejection.

Additionally, the Applicant asserts that the scan converter as claimed in the independent claims 1 and 6 can convert interlaced images from the CCD to progressive images for storage in the PCMCIA card (10) and Hieda fails to disclose a scan converter means "for converting the image sensing signal in the interlace scan mode, into a progressive scan signal." However, the above claimed feature is **not supported in the specification** (see section 3).

Furthermore, the Applicant argues that Hieda does not disclose "converting the image sensing signal in the progressive scan mode, into an interlace scan signal" (amendment, page 8). However, Hieda discloses that the CCD 1 is a non-interlace or progressive scanning type image sensing device (col. 1, lines 6-9). The progressive signal output from the CCD 1 is converted into interlace signal SV1 for recording as described in col. 7, lines 23-39. Therefore, at least in view of the above, Hieda meets the limitation of converting the image sensing signal in the progressive scan mode into an interlace scan signal as required in the Applicant's claimed invention.

Claim Objections

2. Claims 1, 3-6, 8-10 are objected to because of the following the reason set forth below:

The above claims recite limitation "solid image sensor" which should be changed to

-- solid-state image sensor --. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Regarding independent claims 1 and 6, the claimed feature of scan converter means supplied with the image sensing signal from the image sensing signal processing means **for converting the image sensing signal in the interlace scan mode, into a progressive scan signal** is not supported in the specification. Evidently, the written description in the present specification (pages 1-15) does not disclose or fairly suggest a scan converter **for converting the image sensing signal in the interlace scan mode, into a progressive scan signal**.

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For continuing examination, the following art rejection is applied to applicant's claimed invention as best understood in view of the 112 first paragraph rejection above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Udagawa (US 6,519,000) in view of Hieda et al (US 6,011,583) and in further view of Glenn (US 5,349,385).

Regarding claim 1, Udagawa discloses a video camera apparatus comprising:

a solid-state state image sensor for outputting an image sensing signal in an interlace scan mode (movie mode D_B or D_C) or a progressive scan mode (still image mode D_A); wherein an image sensing charge in each pixel of the solid-state image sensor is output in the progressive scan mode and the image sensing charges from adjacent vertical pixels of the solid-state image sensor are added in the solid-state image sensor and output in the interlace scan mode (see Figs. 1-3; col. 1, lines 8-12; col. 2, lines 47-64 and col. 6, line 50 – col. 7, line 65);

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image sensing signal processing means (DSP 15) supplied with the image sensing signal from the solid-state image sensor (see Fig. 1; col. 5, lines 60-65);

removable memory means (17) for storing the image sensing signal read out from the solid-state image sensor in the progressive scan mode (still mode, Fig. 1, col. 5, lines 63-65);

control means (18) for performing control of switching an input to recording means, in correspondence with an operation mode of the solid-state image sensor (see Fig. 1; col. 5, line 60 – col. 6, line 9 wherein the digital processing 15 switches image processing before outputting to memory card 17 in accordance with mode selection control output from system controller 18 and mode selection switch 19);

the recording means for recording image sensing signal read out from the solid-state image sensor in the interlace scan mode (movie mode), directly onto a recording medium (memory card for recording interlace signal in movie mode, col. 5, lines 46-65). It should be noted that the recording medium is a general term representing either a memory card, a tape or other suitable recording medium for recording the image sensing signal.

Udagawa does not disclose scan converter means supplied with the image sensing signal from the image sensing signal processing means, for converting the image sensing signal in the progressive scan mode into an interlace scan signal and for converting the image sensing signal in the interlace scan mode, into a progressive scan signal, and the recording means for recording the interlace scan signal which is converted from the image sensing signal read out from the image sensor in the progressive scan mode onto the recording medium.

Hieda teaches a signal processing unit (3, 4) that is used as a scan converter for converting a progressive image sensing signal (a non-interlaced image sensing signal) output

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from an image sensor (1) into interlaced image signal and recording the interlaced signal into a tape (8) as shown in Fig. 1; col. 4, lines 58-65 & col. 7, lines 23-43.

It would enhance the video camera in Udagawa by providing a scan converter to enable recording of progressive image sensing signal in interlaced format onto another recording medium other than the memory card (17) so that a highly operable camera having capability to record both progressive and interlace signals in the progressive scan mode is realized.

Therefore, it would have been obvious to one of ordinary skill in the art to modify Udagawa with Hieda to include a scan converter for converting the image sensing signal output from the image sensor in progressive mode into an interlace scan signal to be recorded onto a tape as an optional recording medium. Such additional feature would enhance the camera in Udagawa for recording a conventional interlace signal format onto either a memory card or a tape regardless the operation modes of the image sensor, thereby a highly operable camera is realized.

Although Hieda teaches the scan converter represented by signal processing unit (3, 4) for converting a progressive scan signal into an interlace scan signal, Hieda fails to teach that the scan converter can convert an interlace scan signal into a progressive scan signal. However, as taught by Glenn, a scan converter is used to convert either interlace or progressive scan signal into a progressive scan signal that is suitable for a progressive display to provide good motion rendition and good vertical resolution without interline flicker (see Glenn, col. 2, lines 38-45).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the scan converter in the combination of Udagawa and Heida in light of the teaching of Glenn to convert the interlace signal read out from the tape (8) into a progressive signal to provide a better

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quality images output to a progressive display connected at the digital signal output (15) during playback process.

Regarding claim 2, in the combination of Udagawa and Hieda, the Mode Switch 19 in Udagawa would perform switching between still image recording and motion image recording (see Udagawa, Fig. 1, col. 5, line 66 – col. 6, line 2) since it is designated for switching operation modes of the camera.

Regarding claim 4, Udagawa shows mode selection switch (19) for switching the operation mode of the solid-state sensor to the progressive scan mode and the interlace scan mode (see Fig. 1 & col. 2, lines 47-64).

Regarding claims 5 & 8, the claimed limitations are analyzed with respect to claims 1 – 3.

Regarding claims 6 & 7, the claimed limitations are analyzed with respect to claims 1 & 2, respectively.

Allowable Subject Matter

5. Claims 3, 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form to **overcome the 112 rejection and**

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objection in sections 2 and 3 and including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 3 and 9, the prior art of record fails to teach or suggest switching means for switching a reading mode of the solid-state image sensor to progressive scan mode when the recording medium is a memory card.

Regarding claim 10, the prior art of record fails to teach or suggest a step of switching an operation mode the solid state image sensor to the progressive scan mode and the interlace scan mode when the recording medium is a magnetic recording medium.

Conclusion

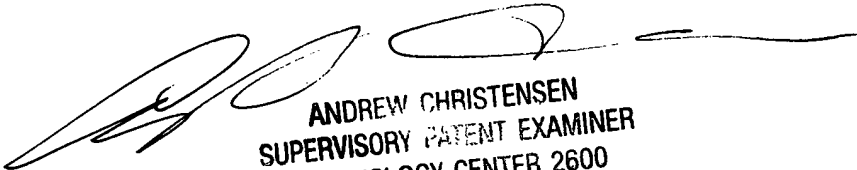
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (703) 605-4246. The examiner can normally be reached on Monday - Thursday, 8:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew B Christensen can be reached on (703) 308-9644. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NT.



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